

**WHAT IS CLAIMED IS:**

1. A pneumatic suspension system comprising:
  - a cylinder;
  - a piston disposed inside said cylinder for reciprocation in response to vehicle
  - 5 vibration;
  - a piston rod connected to said piston to protrude outside of said cylinder;
  - a main spring mounted inside said cylinder for absorbing shock;
  - detecting means for detecting a position and motion of said piston;
  - an air nozzle connected to an actuator for supplying air into said cylinder in
  - 10 response to the position and motion of said piston;
  - an air passage for connecting an upper side and lower side of said cylinder so
  - that air in the upper space and lower space can be circulated; and
  - a solenoid valve for opening and closing said air passage.
- 15 2. The system as defined in claim 1, wherein said detecting means comprises:
  - a magnetic belt attached to the piston rod along a longitudinal direction thereof;
  - and
  - a sensor for sensing the position of the piston via said magnetic belt.
- 20 3. The system as defined in claim 1, wherein said cylinder is mounted at an inner upper side and an inner lower side thereof with shock absorbing members for absorbing shock generated by movement of said piston.

4. The system as defined in claim 3, wherein said shock absorbing members are fixed to auxiliary springs, each closely abutted to the inner upper surface and inner lower surface of said cylinder.